

FACT SHEET: HEALTH EFFECTS OF LEAD



What are the health effects of lead?

Young children, especially children under the age of six including developing fetuses, are at greatest risk from exposure to lead. The growing bodies of infants and young children tend to absorb more lead than those of adults, and children's developing brains and nervous systems are more sensitive to the damaging effects of lead.

The current blood lead level of concern in children is 10 micrograms (μg) of lead per deciliter (dL) of blood (10 $\mu\text{g}/\text{dL}$). However, some health experts believe that adverse effects may occur at even lower levels. Children with high levels of lead in their bodies can experience a variety of health problems. These include: damage to the brain and nervous system; behavioral, speech, language, and other learning problems; attention deficit and hyperactivity; slowed growth; poor muscle coordination; kidney damage; hearing problems; and headaches.

Acute lead poisoning at very high blood lead levels (upwards of 100 $\mu\text{g}/\text{dL}$) can lead to seizures, unconsciousness, and, in the most extreme cases, death.

The ingestion and inhalation of lead can be harmful to people of all ages, although healthy adults are at a much lower risk than children. Health effects in adults depend on many factors, including how long they have been exposed to lead and at what concentrations. Adults with high lead levels in their bodies can experience high blood pressure; nerve disorders; digestive problems; memory and concentration problems; and muscle and joint pain. Lead can also cause fertility problems for both men and women.

How are people exposed to lead?

Research suggests that the primary sources of lead exposure for most children are paint, dust, and soil in and around older housing that was built prior to the bans on lead paint in 1978. Homes built before 1950 are even more likely to have been painted with lead-based paint. Lead paint on windows, doors, and cupboards that are opened and closed frequently can release lead-containing dusts which contaminate surfaces in the home. Children can be exposed to lead from chewing on lead-contaminated objects or from normal hand-to-mouth contact resulting in ingestion of paint chips, dust, or soil containing lead.

Some adults can be exposed to lead in their work places. Lead from the work place can be carried back into the home on clothing and become a source of lead for children and other adults in the home.

Drinking water can be another source of lead. Lead can leach into the water when water in the lines comes into contact with household plumbing materials containing lead. Although the main sources of exposure to lead are ingesting paint chips and inhaling dust, EPA estimates that 10 to 20 percent of human exposure to lead may come from lead in drinking water. Infants who consume mostly mixed formula can receive 40 to 60 percent of their exposure to lead from drinking water.

What are the most important things I can do to protect my family?

If you know or suspect that your house has potential lead hazards from paint, dust, or soil you should:

- If you own your home, have it tested for potential lead risks.
- If you rent, notify your landlord of peeling or chipping paint.
- Clean up paint chips immediately.
- Clean floors, window frames, window sills, and other surfaces weekly.
- Thoroughly rinse sponges and mop heads after cleaning dirty and dusty areas.
- Clean or remove shoes before entering your home to avoid tracking in lead from soil.

Follow consumer advisories for flushing water to reduce lead exposure through drinking water. Consumer advisories for District of Columbia residents are available on EPA's website - <http://www.epa.gov/dclead/#consumer> - and are summarized in the tip sheet, *Getting the Lead out of DC Drinking Water*.

What else can I do to protect my child?

In your home you can:

- Be alert for chipping and flaking paint. Use only safe interior paints on toys, walls, furniture, and other items.
- Don't use pottery for cooking or serving if you are unsure about its glaze.
- Don't store food in open cans.

If you work with lead:

- Don't bring it home with you. Shower and change clothes before coming home.
- Wash your clothes separately from your family's clothes.
- Follow all occupational safety guidelines for cleaning and storing work clothes and equipment.

With your child:

- Make sure children eat nutritious, low-fat meals high in iron, vitamin C, and calcium. Include dairy products such as milk, yogurt, and cheese. Children with good diets absorb less lead.
- Keep children from chewing on window sills or other painted surfaces.
- Wash children's hands often, especially before they eat and before naptime and bedtime.
- Keep play areas clean. Wash bottles, pacifiers, toys, and stuffed animals regularly.
- Don't allow your child to eat snow or icicles, especially if you live in an old neighborhood where houses may have been painted with lead paint.

Can children be tested to determine if they have been exposed to lead?

The level of lead in your blood can be tested, and early detection means early intervention.

- A screening blood test can reveal if there is an elevated level of lead in your child's blood.
- A second blood test is usually done if a child's screening test shows that lead may be present. Other tests may be necessary.
- Follow-up questions will be asked to learn about the child's behavior, health, and symptoms; anything the child has chewed on or swallowed; possible sources of lead; and the child's diet and/or family medical history.
- Other measures may include home inspection for lead sources, or advice about how to protect children.

How can I determine if my child should be screened?

In general, all high-risk children need screening. Children under the age of 6 may be at high risk if they:

- Have had a brother or sister with symptoms of lead exposure.
- Live in an area that has a high number of older homes (built before 1950).
- Live in or regularly visit a home built before 1950.
- Live in or regularly visit a home built before 1975 that has recently been remodeled.
- Live in or regularly visit a residence served by a lead service line.

The DC Department of Health (DOH) will provide **FREE BLOOD SCREENING** for pregnant women, children under 6 but older than 6 months, and breastfeeding mothers for residents whose homes are served by a **lead service line**. Call **(202) 671-0733** for more information.

For more information on the health effects of lead, visit EPA's website at <http://www.epa.gov/dclead/health.htm>, call the National Lead Information Center at 1-800-424-LEAD, or call the EPA Safe Drinking Water Hotline at (800) 426-4791.